Notice No.3

Rules and Regulations for the Classification of Offshore Units July 2020

The status of this Rule set is amended as shown and is now to be read in conjunction with this and prior Notices. Any corrigenda included in the Notice are effective immediately.

Please note that corrigenda amends to paragraphs, Tables and Figures are not shown in their entirety.

Issue date: June 2021

Amendments to	Effective date	IACS/IMO implementation (if applicable)
Part 1, Chapter 3, Sections 2 & 5	1 July 2021	1 July 2021
Part 3, Chapter 8, Section 3	1 July 2021	N/A
Part 3, Chapter 10, Sections 1 & 16	1 July 2021	N/A
Part 4, Chapter 1, Section 4	1 July 2021	1 July 2021
Part 4, Chapter 2, Section 4	1 July 2021	N/A
Part 4, Chapter 3, Section 4	1 July 2021	N/A
Part 6, Chapter 1, Section 2	1 July 2021	N/A
Part 6, Chapter 2, Section 3	1 July 2021	N/A
Part 10, Chapter 2, Sections 3 & 5	1 July 2021	N/A

Part 1, Chapter 3
Periodical Survey Regulations

■ *Section 2*
Annual Surveys - Hull and machinery requirements

2.2 Structure and equipment

(Part only shown)

2.2.2 **All unit types.** The Surveyor is to be satisfied regarding the efficient condition of:

- Watertight bulkheads, and end bulkheads of enclosed superstructures.
- Where applicable, the electrical cables schedule of watertight penetrations (e.g. cable transit seal systems register) is to be reviewed to confirm it is being maintained, *see Pt 4, Ch 1, 4.5 Plans to be supplied to the unit* and *Pt 6, Ch 2, 11.11 Penetration of bulkhead and decks by cables* of the *Rules and Regulations for the Classification of Ships*.
- Watertight doors and hatch covers in watertight boundaries, their indicators and alarms, to be examined and tested (locally and remotely), together with an examination of watertight boundary penetrations, so far as is practicable.

■ *Section 5*
Special Survey – Hull requirements

5.3 Examination and testing

5.3.3 All watertight cable transits are to be examined to confirm their satisfactory condition by an LR surveyor or by a firm approved as a service supplier in accordance with LR's *Procedures for Approval of Service Suppliers*. Where applicable, the electrical cables schedule of watertight penetrations (e.g. cable transit seal systems register) is to be reviewed to confirm it is being maintained, *see Pt 4, Ch 1, 4.5 Plans to be supplied to the unit* and *Pt 6, Ch 2, 11.11 Penetration of bulkhead and decks by cables* of the *Rules and Regulations for the Classification of Ships*.

~~5.3.3~~ 5.3.4 **Ship units and other surface type units.** The requirements of *Pt 1, Ch 3, 5.3 Examination and testing* of the ~~Rules for Ships~~ *Rules and Regulations for the Classification of Ships* are to be complied with, as applicable. Testing of crude oil storage tanks is to be carried out as deemed necessary by the attending Surveyor. For units assigned an ESP notation, the requirements of *Pt 1, Ch 3, 7.5 Testing* of the ~~Rules for Ships~~ *Rules and Regulations for the Classification of Ships* are to be complied with as applicable, ~~see also 5.3.15~~ *see also Pt 1, Ch 3, 5.3 Examination and testing 5.3.15*.

Existing paragraphs 5.3.4 to 5.3.34 have been renumbered 5.3.5 to 5.3.35.

Part 3, Chapter 8
Process Plant Facility

■ *Section 3*
Process and utility systems

3.7 Depressurising system

3.7.6 Depressurisation should start automatically on confirmed fire and gas detection. A time delay to allow the closure of ESD valves and shutdown of the process plant should be provided, and manual initiation from the ESD system should also be provided. If sequential depressurisation ~~is required due to the size of the production unit and restriction on the flare size, prioritisation to the zone where the fire is detected is of paramount importance to preserve the integrity of the production unit.~~ is required, the requirements of *Pt 3, Ch 8, 3.7 Depressurising system 3.7.8* shall be met.

3.7.7 ~~Blowdown~~ Depressurisation valves shall fail to the open position; however, when sequential depressurisation is to be provided and the flare could be overloaded, an air accumulator is to be provided for each ~~blowdown~~ depressurisation valve to prevent its opening in case of loss of the main air supply.

3.7.8 Where simultaneous depressurisation is not practicable, sequential depressurisation may be considered. The order of sequential depressurisation is to be controlled by the Integrated Control and Safety System (ICSS). The initial depressurisation zone is to be initiated in accordance with the requirements of *Pt 3, Ch 8, 3.7 Depressurising system 3.7.6*. Subsequent zones are to be

initiated in a pre-programmed sequence in the ICSS based on the fire assessment of adjacent zones, until all zones are depressurised to the required pressure. The duration of each stage of the depressurisation system is to be such as to ensure that the pressure in that particular zone is reduced to a figure in which its mechanical integrity is not compromised (*see Pt 3, Ch 8, 3.7 Depressurising system 3.7.2*) and the capability of the flare is to be such as to prevent its overloading when the sequence moves to the next pre-determined zone. All depressurisation valves for a single zone are to be controlled from one instrument room. The design of hardware, software, communications and Uninterruptible Power Systems (UPS) systems shall ensure that there is no single point of failure in the depressurisation sequence.

Part 3, Chapter 10
Positional Mooring System

■ *Section 1*
General

1.2 Class notations

1.2.6 Inshore/at-shore-moored units provided with a long-term terminal mooring system, which complies with the requirements of *Pt 3, Ch 10, 16 Long-term nearshore positional mooring system* will be eligible for the assignment of a special features class notation **LTMOOR**. Units with higher redundancy due to two line damages that complies with ShipRight procedure *Long-term Nearshore Positional Mooring System* will be eligible for a special feature class notation **LTMOOR(HR)**.

■ *Section 16*
Long-term nearshore positional mooring system

16.3 Mooring layout

~~16.3.3 A mooring line management plan is to be provided to record lifecycle of each mooring line and to have aspects pertinent to load monitoring during operation, inspection of mooring lines, line retirement strategic plan and risk assessment on human intervention. The guidance notes by OCIMF can be adopted in this case, as agreed with LR.~~

16.8 General guidelines on maintenance and inspection

16.8.1 A mooring system management plan is to be provided to record the lifecycles of mooring equipment (e.g. mooring fittings, fairleads, mooring lines, tails, pennants, joining shackles, etc.), including operating, maintenance and inspection instructions as recommended by the original equipment manufacturer. Publications from OCIMF (i.e. latest edition of Mooring Equipment Guidelines) can be adopted as agreed with LR.

The mooring system management plan is to be approved by LR and must be retained on board throughout the service life of the unit and be considered as live documents for recording any changes that have occurred to the mooring system since the unit was built or on the day the long-term near shore positional mooring system notation was given

16.8.2 The format of the mooring system management plan shall contain, as a minimum, information covering the following:

- Mooring system design philosophy;
- Records of mooring system including historical data of upgrades or modifications to mooring equipment; and
- Inspection, maintenance including record for related documents and certifications, and retirement strategy for mooring lines based on guidance from the original equipment manufacturer.

For chain, wire and other steel components, *see Pt 3 Ch 20, 2 General guidelines on inspection of mooring system components*. For fibre rope, the industry standard such as *CI 2001-04: Fibre Rope Inspection and Retirement Criteria* recognised by INTERTANKO can be adopted as applicable.

Part 4, Chapter 1
General

■ *Section 4*
Information required

4.5 Plans to be supplied to the unit

(Part only shown)

4.5.1 The following plans and documents are to be placed on board the unit, *see* *Pt 3, Ch 1, 2 Information required*:

- Corrosion control system.
- Electrical cables schedule of watertight penetrations (e.g. cable transit seal systems register).

Part 4, Chapter 2
Materials

■ *Section 4*
Steel grades

4.1 General

(Part only shown)

Table 2.4.1 Thickness limitations for ~~hull~~ structural steels for various application categories and design temperatures for use in welded construction including plates, bars, sections, forgings, and castings

Structural category	Required steel grade, *see* Note 2	Maximum thickness permitted (mm) for various minimum design temperatures, *see* Note 8			
		0°C	–10°C	–20°C	–30°C
Secondary	A	30	20	12,5	X
	B	60	50	25	10
	D	100	100	80	50
	E	150	150	120	100
	AH	50	40	25	10
	DH	100	100	70	50
	EH	150	150	100	80
	FH	150	150	150	120
	AQ	50	40	25	10
	DQ	100	100	70	50
	EQ	150	150	120	80
	FQ	150	150	150	120
Primary	A	20	12,5	X	X
	B	25	25	12,5	X
	D	50	50	30	20
	E	100	100	65	40
	AH	25	25	12,5	X
	DH	50	50	30	20

	EH	120	100	65	40
	FH	150	150	150	100
	AQ	25	25	X	X
	DQ	50	50	30	20
	EQ	120	100	65	40
	FQ	150	150	150	100
Special	A	12,5	X	X	X
	B	15	12,5	X	X
	D	30	30	20	10
	E	100	75	35	30
	AH	20	12,5	X	X
	DH	30	30	12,5	10
	EH	100	75	35	25
	FH	150	100	80	50
	AQ	15	12,5	X	X
	DQ	30	30	12,5	10
	EQ	100	75	30	25
	FQ	150	100	80	60

NOTES

2. ~~Materials~~ Plate materials are to comply with the requirements of *Ch 3 Rolled Steel Plates, Strip, Sections and Bars* of the ~~Rules for Materials~~ *Rules for the Manufacture, Testing and Certification of Materials*. Castings and forgings shall satisfy the same Charpy V-notch requirements as the equivalent plate grades in this table.
3. Q grades refer to quenched and tempered grades (*Ch 3, 10 High strength quenched and tempered steels for welded structures* of the ~~Rules for Materials~~ *Rules for the Manufacture, Testing and Certification of Materials*).

Part 4, Chapter 3
Structural Design

■ *Section 4*
Structural design loads

4.16 Accidental loads

(Part only shown)

4.16.1 The following credible failures and accidents are to be considered in the design as applicable to the function of the unit:

• Emergency helicopter landings.

• Abnormal metocean.

4.16.13 Abnormal metocean with a return period of 1000 ~ 10000 years are to be considered in the design of the floating structure. Unless the upper hull structure is designed for wave impact, the unit is to be designed to have a positive air gap in abnormal metocean.

Existing paragraphs 4.16.13 and 4.16.14 have been renumbered 4.16.14 and 4.16.15.

Part 6, Chapter 1
Control Engineering Systems

■ *Section 2*
Essential features for control, alarm and safety systems

2.12 Programmable electronic systems – Additional requirements for essential services and safety critical systems

2.12.1 The requirements for programmable electronic systems incorporated in control, alarm or safety systems for essential services, as defined by *Pt 6, Ch 2, 1.6 Definitions* or safety critical systems, are given in *Pt 6, Ch 1, 2.13 Programmable electronic systems - Additional requirements for essential services and safety critical systems* of the ~~Rules for Ships~~ *Rules and Regulations for the Classification of Ships*, which are to be complied with. Additions or amendments to these requirements are given in the following paragraph(s) of this sub-Section.

2.12.3 Where sequential depressurisation systems are controlled by an Integrated Control and Safety System (ICSS), the integrity of the system design is to meet the requirements of *Pt 3, Ch 8, 3.7 Depressurising system 3.7.8*. The performance of the sequential depressurisation system shall not be impacted by loss of functionality from a single instrument room including of loss of functionality due to loss of communications, software, and hardware failure or due to fire or explosion in the instrument room.

Part 6, Chapter 2
Electrical Engineering

■ *Section 3*
Emergency source of electrical power

3.2 Emergency source of electrical power

(Part only shown)

3.2.4 The electrical power available is to be sufficient to supply all those services that are essential for safety in an emergency, due regard being paid to such services as may have to be operated simultaneously. ~~The emergency source of electrical power is to be capable, having regard to starting currents and the transitory nature of certain loads, of supplying simultaneously at least the following services for the periods specified hereinafter, if they depend upon an electrical source for their operation:~~

Where emergency sources of electrical power such as Uninterruptible Power Systems (UPS) systems are required to support sequential depressurisation systems, the location and integrity of the systems are to meet the requirements of *Pt 3, Ch 8, 3.7 Depressurising system 3.7.8*. The performance of the sequential depressurisation system shall not be impacted due to the location of UPS or routing of cables in the event of a fire or explosion in the room.

The emergency source of electrical power is to be capable, having regard to starting currents and the transitory nature of certain loads, of supplying simultaneously at least the following services for the periods specified hereinafter, if they depend upon an electrical source of power for their operation:

Part 10, Chapter 2
Loads and Combinations

■ *Section 3*
Dynamic load components

3.4 Return periods and probability factor, f_{prob}

(Part only shown)

Table 2.3.3 Return periods for scantling requirements and strength assessment

Operational condition	Transit			Normal on-site operation	Inspection/maintenance	Accidental
	Delivery voyage	Restricted service area	Unrestricted world-wide			
Return period	1 year with all year data or 10 years with seasonal data	25 years	25 years	100 years	100 years with all year data or 100 years with seasonal data where consistent with the operation of the unit, *see also Pt 10, Ch 2, 3.4 Return periods and probability factor, fprob 3.4.5* and Note 1	1 year post-accidental

■ *Section 5*
Accidental loads

5.4 Abnormal condition

5.4.1 **General**

(a) The hull structure is to comply with the applicable requirements for hull girder ultimate strength under abnormal metocean, *see* LR's *ShipRight Procedure for Ship Units*.

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